0590





OIPE

RAW SEQUENCE LISTING

DATE: 04/19/2002

PATENT APPLICATION: US/10/046,420

TIME: 16:05:07

1 2	<110> <120>	TTTI	ᆔ	TNV	ENTI	$ON \cdot 1$	MOLE	CULA:	R RE	GULA'	TORY	CIR	CUIT	S TO	ACH	IEVE		
3		SUSTAINED ACTIVATION OF GENES OF INTEREST BY A SINGLE STRESS FILE REFERENCE: 870109.409																
4	<130>	FILE	REF	EREN	CE:	8701	09.4	09			20							
5	<140>	CURR	ENT .	APPL	ICAT	ION	NUMB	ER:	T0\0	46,4	20							
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10	<151>	PRIO	R FI	LING	DAT	E: 1	999-	05-0	3						ME	$II \mid II$	EF	
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		FEATURE:																
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25		gcgg	cggc	gc g	igccc	ggaa	ig go	:Lygc	gegg	t att	acto	gee	ata	gat	cta	CCC	ata	175
26		tttg	cggc	cg c	ctccc	ctccg	ic cr	alle	CCLC	,	.gccc	gug	Met	Asr	Lei	ı Pro	val	
27													1		, 100		5	•
28								~~~	200	220	atc	cca	_	ttc	cta	acc	aaq	223
29		ggc	CCC	ggc	gcg	gcg	ggg	CCC	ayc	Agn	Val	Dro	Δla	Phe	Leu	acc Thr	Lvs	
30		GLY	Pro	GIĀ	Ата		GTA	PIO	Set	MSII	15	110				20	-	
31						10	200	~~~	aaa	тас		gac	aca	ctc	atc	tgc	tgg	271
32		ctg	tgg -	acc	CLC	gug	age	yac	Dro	Acn.	Thr	Δen	Δla	Leu	Ile	Cys	Trp	
33		Leu	Trp	Thr		vaı	ser	ASP	PIO	30	1111	nsp	2114		35	-1-	-	
34					25			++0	020		ttc	gac	caq	aac	cag	ttt	qcc	319
35		agc	ccg	agc	999	adc	cor	Dha	Uie	Val	Phe	Asp	Gln	Glv	Gln	Phe	Āla	
36		ser	Pro		GIY	ASII	Ser	FIIC	45	vai	1110		0	50				
37				40	a+ a	000	220	tac	++c	ааσ	cac	aac	aac	atq	qcc	agc	ttc	367
38		aag	gag	gra	tou	Dro	Tue	Tur	Dhe	Lvs	His	Asn	Asn	Met	Ãla	Ser	Phe	
39		гàг		Val	ьец	PIO	БУЗ	60	1110	בעם	1110		65					
40			55		ata	224	ata	tat	aac	ttc	caa	aáa		atc	cac	atc	gag	415
41		gtg	cgg	cag	Lou	Acn	Mot	Tur	Glv	Phe	Ara	Lvs	Val	Val	His	Ile	Glu	
42			Arg	GTII	Leu	ASII	75	1 7 1	011			80					85	
43		70			a+ a	a+a		cca	ααα	aga	gac		acσ	gag	ttc	cag	cac	463
44		cag	ggc	gge	Tou	77-1	Tuc	Dro	Clu	Δra	Asp	Asp	Thr	Ğlu	Phe	Gln	His	
45		GIN	СТА	стХ	ьeu	90	пур	110	- JI	**** 9	95					100		
46			+~-	++~	a+~	20	aac	car	σασ	саσ		ctt	gag	aac	atc	aag	agg	511
47		cca	cuc	Dha	Ton	λ×α	Gl tr	Gln	Glu	Gln	Leu	Leu	Glu	Asn	Ile	Lys	Arg	
48	5	PLO	cys	FIIE	ьец	тту	GTÅ	0111	JIU							-	-	

RAW SEQUENCE LISTING DATE: 04/19/2002 PATENT APPLICATION: US/10/046,420 TIME: 16:05:07

														115			
49				105				•	110		~~~	<b>~2 ~</b>	ata		atc	cac	559
50	aaa	gtg	acc	agt	gtg	tcc	acc	ctg	aag	agt	gaa	yac	Tla	Lve	Tle	Ara	
51	Lys	Val	Thr	Ser	Val	Ser	Thr	Leu	ьуs	ser	GIU	АБР	130	цуз	110	9	
52			120					125		~~~	~+ ~	aaa		atα	ааσ	aaa	607
53	cag	gac	agc	gtc	acc	aag	ctg	ctg	acg	gac	y Ly	Cln	Lou	Mot	Lve	Glv	
54	Gln	Asp	Ser	Val	Thr	Lys	Leu	Leu	THE	ASP	var	145	пси	1100	2,2	U-1	
55		135					140		-+-	a+ a	~~~		ааπ	cat	σασ	aat	655
56	aag	cag	gag	tgc	atg	gac	tcc	aag	CLC	tou	η C C	Mot	Lvs	His	Glu	Asn	
57	Lys	Gln	Glu	Cys	Met	Asp	ser	Lys	ьeu	ьеи	160	Mec	175	1120		165	
58	150					155		~~~	200	a++	700	cad	aaσ	cat	acc	caq	703
59	gag	gct	ctg	tgg	cgg	gag	gtg	gcc	cor	TAN	Ara	Gln	Lvs	His	Ala	Gln	
60	Glu	Ala	Leu	Trp		GIU	Val	Ala	Ser	175	ALG	01			180		
61					170			a+ a	a++		ttc	cta	atc	t.ca		ata	751
62	caa	cag	aaa	gtc	gtc	aac	aag	ctc	TIA	Cln	Dhe	Len	Tle	Ser	Leu	Val	
63	Gln	Gln	Lys		Val	Asn	гаг	Leu	190	GIII	riic	шси	110	195			
64				185				~+~	220	2072	aan	atc	ccc		atq	ctq	799
65	cag	tca	aac	cgg	atc	ctg	999	gtg	Tyc	Ara	T.VS	Tle	Pro	Leu	Met	Leu	
66	Gln	Ser		Arg	TTE	Leu	СТУ	Val 205	цуз	лгу	טענו	110	210				
67			200				ant	tcc	ata	CCC	ааσ	tat		caa	caq	ttc	847
68	aac	gac	agt	ggc	tca	gca	Cat	Ser	Mot	Dro	Lvs	Tvr	Ser	Arq	Gln	Phe	
69	Asn		Ser	GIY	ser	Ala	220	ser	Mec	rio	ц	225		3			
70		215					220	tcg	aac	CCC	tac			ccc	tcc	cca	895
71	tcc	ctg	gag	cac	gtc	Cac	990	Cor	Glv	Pro	Tvr	Ser	Ala	Pro	Ser	Pro	
72			GIu	HIS	vaı	235	GIY	Ser	GLY	110	240					245	
73	230					233	at a	tac	acc	cct			ata	qcc	agc	tct Ser	943
74	gcc	tac	agc	agc	Con	ayc	Tou	Tur	Δla	Pro	Asp	Ala	Val	Āla	Ser	Ser	
75	Ala	Tyr	ser	ser	250	Ser	пец	- 1 Y L	niu	255					260		
76					250	~ ~ ~	ato	acc	σασ	cta	act	cct	gee	aqc	ccc	atg Met	991
77	gga	CCC	ate	TIA	Cor	Aen	Tle	Thr	Glu	Leu	Ala	Pro	Āla	Ser	Pro	Met	
78	GLY	Pro	ire	265	261	АЗР	110	,	270					275			
79				~~~	aaa	age	ata	gac	σaσ	ago	ccc	cta	tcc	ago	ago	ccc	1039
80	gcc	Cox	. Dro	. ggc	999 G1v	Ser	Tle	Asp	Glu	Arc	Pro	Lei	ı Ser	ser	Ser	Pro	
81	ATG	ser	280		GLY	DCI		285		-			290	)			
82	a+ a	. ~+~	+	~+ a	aad	σaσ	σас	r ccc	cac	ago	ccg	g cct	cag	ago	ccc	cgg	1087
83	Tou	1751	λra	.y.co .Val	Lvs	Glu	Glu	Pro	Pro	sei	r	Pro	Glr	ı Ser	Pro	Arg	
84		205	:				300	)				30.	,				
85	at:		. ~~~	r aca	agt	ccc	gad	cqc	cca	tct	t tc	c gt	g gad	acc	cto	ttg	1135
86	y v = 1	ւ ցաջ	ı Glu	ı Ala	Ser	Pro	Gly	Arq	Pro	Sea	r Se	r Val	l Asp	o Thr	Leu	. Dea	
87	216					315	`				321	U				323	
88			ı acc	a acc	cto	att	- σa <i>σ</i>	to	ato	cte	g cg	g ga	g agt	t gaa	cct	gcc	. 1183
89 90	COL	o Dro	n Thr	· Ala	Leu	ı Ile	Ası	ser	: Ile	e Lei	ı Ar	g Gl	u Sei	r Glu	Pro	Ala	
91					330	)				33:	)				J-10	•	
	ccc	י מכנ	tec	ato	aca	acc	cto	aco	gad	c gc	c ag	g gg	c ca	c acq	g gad	acc Thr	1231
92 93	Dre	- yc\	Sei	r Val	Thr	Ala	a Lei	ı Thi	Ası	Al	a Ar	g Gl	y Hi:	s Thi	. Ası	Thr	
93				315					350	)				33.	,		1050
95	ga	ים מ	e cac	· aat	- 000	to	c cc	e deg	g cc	cac	c tc	c ac	C CC	t gaa	a aag	g tgc	1279
96	Gli	יפפ פ	v Arc	, Pro	Pro	se:	r Pro	o Pro	o Pro	o Th	r Se	r Th	L PL	O GI	ı Lys	s Cys	
97	31		360					36	5				37	0			
91																	

RAW SEQUENCE LISTING DATE: 04/19/2002 PATENT APPLICATION: US/10/046,420 TIME: 16:05:07

	and gog oto agt gas cas ttg gat 132	27
98	the second two often day and day udy out due out out out	
99	Leu Ser Val Ala Cys Leu Asp Lys Asn Glu Leu Ser Asp His Leu Asp	
100		375
101	gct atg gac too aac ctg gat aac ctg cag do to so so ser His Ala Met Asp Ser Asn Leu Asp Asn Leu Gln Thr Met Leu Ser Ser His	
102		
103		423
104	ggc ttc agc gtg gac acc agt gcc ccg ccg sac son the Ser Pro Ser Gly Phe Ser Val Asp Thr Ser Ala Leu Leu Asp Leu Phe Ser Pro Ser	
105	Gly Phe Ser Val Asp III Ser Ald Bed 250 by 420	
106		471
107	Val Thr Val Pro Asp Met Ser Leu Pro Asp Leu Asp Ser Ser Leu Ala	
108	Val Thr Val Pro Asp Net Ser led 120 top 435	
109	the same storing to company and control an	519
110	Ser Ile Gln Glu Leu Leu Ser Pro Gln Glu Pro Pro Arg Pro Pro Glu	
111	440 445 . 450	
112	and agg agg the transport agg and car ctg gtg car tac aca 1	567
113	Ala Glu Asn Ser Ser Pro Asp Ser Gly Lys Gln Leu Val His Tyr Thr	
114	4EE 460	
115	and cog ctg ttc ctg ctg gac ccc ggc tcc gtg gac acc ggg agc l	615
116	Ala Gln Pro Leu Phe Leu Leu Asp Pro Gly Ser Val Asp Thr Gly Ser	
117	475 480 403	
118	and granging granging character granging grangin	.663
119	Asn Asp Leu Pro Val Leu Phe Glu Leu Gly Glu Gly Ser Tyr Phe Ser	
120	495	
121	and the goo gag sto good acc acc atc toc otg otg aca ggc	711
122	Glu Gly Asp Gly Phe Ala Glu Asp Pro Thr Ile Ser Leu Leu Thr Gly	
123	505 510	
124 125	tog gag cot coc aaa goo aag gac coc act gto too tagaggecco 1	L757
126	Ser Glu Pro Pro Lys Ala Lys Asp Pro Thr Val Ser	
127	525	
128	gggggggggggggggggggggggggggggggggggggg	1817
129		1877
130		1937
131	torganing contacts together aggregation aged accer gyactyacco	1997 2057
132	the section to the section of the se	2057 2117
133	ctccacagag atacacagat atatacacac agtggatgga cggacaagac aggcagaga	2117 2156
134	ctataaacag acaggotota aaaaaaaaaa aaaaaaaaa	2130
	2210> SEQ ID NO: 2	
137	2211> LENGTH: 529	
	C212> TYPE: PRT	
139	C213> ORGANISM: Homo sapien	
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142	1 5 10 17	
143	Ala Phe Leu Thr Lys Leu Trp Thr Leu Val Ser Asp Pro Asp Thr Asp	
144	20 25	
145	Ala Leu Ile Cys Trp Ser Pro Ser Gly Asn Ser Phe His Val Phe Asp	
146	35 40 43	
147	Gln Gly Gln Phe Ala Lys Glu Val Leu Pro Lys Tyr Phe Lys His Asn	

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148		50					55					60				
149	λen	Met	Δla	Ser	Phe	Val		Gln	Leu	Asn	Met	Tyr	Gly	Phe	Arg	Lys
150	65	1100	1114	502		70	,				75		_			80
151	Val	Val	His	Tle	Glu		Glv	Glv	Leu	Val	Lys	Pro	Glu	Arg	Asp	Asp
152	VUI	Vul	1110	110	85	<b>V</b>	1	1		90	•			_	95	
153	Thr	Glu	Dho	Gln		Pro	Cvs	Phe	Leu	Ara	Glv	Gln	Glu	Gln	Leu	Leu
	1111	GIU	FIIC	100	1110		0,10		105	5	1			110	•	
154	Clu	Asn	т1Д		Δrσ	Lvs	Va 1	Thr		Val	Ser	Thr	Leu	Lys	Ser	Glu
155	GIU	VOII	115	шуз	nr 9	<b>L</b> , 5	,	120	502				125	•		
156	7.00	Ile		Tlo	λνα	Gln	Men		Va1	Thr	Tivs	Leu		Thr	Asp	Val
157	ASP	130	гуз	116	лту	OIII	135	DCI	, ar		212	140				
158	<b>61</b> n	Leu	Mot	Tvc	C117	Luc		Glu	Cvs	Met	Asp		Lvs	Leu	Leu	Ala
159		Leu	Mec	цуэ	СТУ	150	OIII	OIU	0,0		155		-1-			160
160	145	Lys	II d	Clu	λan		λla	T.Q11	Trn	Δrσ		Va 1	λla	Ser	Leu	Arq
161	Met	гаг	HIS	GIU	165	GIU	на	Deu	115	170	Olu	, 41		501	175	9
162	a1	Lys	774 -	7.1.		Cln	Cln	Tvc	Va l		Δen	T.v.c	Leu	Tle		Phe
163	GIn	ьys	HIS		GIII	GIII	GTII	цуъ	185	Vai	ASII	цуз	LCu	190	0111	1110
164	_	- 1	<b>a</b>	180	17 I	~1 <sub>~</sub>	000	7 an		т10	Lan	Gl v	Va l		Δra	Lvs
165	Leu	Ile		ьeu	vaı	GIN	ser		AIG	TIE	ьеи	СТУ	205	шуз	nrg	цу
166		_	195		<b>-</b>		3	200	c1	Cor	λla	uic		Mot	Dro	T.v.c
167	Ile	Pro	Leu	мет	Leu	ASN		ser	GIY	ser	нта	220	261	nec	FIU	цуз
168		210	_	<b>a</b> 1.	D1	<b>a</b>	215	<b>61</b>	mi a	17-1	uic		cor	Clv	Dro	ጥህጉ
169	_	Ser	Arg	GIn	Pne		Leu	GIU	HIS	Val		GIY	Sei	GLY	FIO	240
170	225	_ •	_	_	_	230	m	<b>a</b>	C a m	Con	235	T 011	Пттъ	בוג	Dro	
171	Ser	Ala	Pro	ser		Ala	туг	ser	Ser	250	ser	Leu	TYL	Ата	255	кар
172		1			245	<b>a</b> 1	D	т1.	т1.		A an	т1.	Thr	Glu		Δla
173	Ala	Val	Ala		ser	GLY	Pro	тте		ser	АБР	TIE	7 111	270	пец	AIu
174			_	260				D==0	265	C1	Cor	T10	7 cn		λνα	Dro
175	Pro	Ala		Pro	мет	Ala	ser		СТУ	СТУ	ser	TIE	285	GIU	АТУ	FIO
176		_	275	_	_	<b>.</b>	**- 1	280	17.0 1	T ***	C1.,	cl.,		Dro	Sar	Dro
177	Leu	Ser	ser	ser	Pro	Leu		Arg	vaı	гуъ	GIU	300	FIO	FIO	DCI	110
178	_	290	_			17- 1	295	a1.,	71-	Cor	Dro		λνα	Dro	Sor	Ser
179		Gln	ser	Pro	Arg		GIU	GIU	Ата	ser	315	СТУ	AIG	FIU	Det	320
180	305		_,	_		310	D	mh	215	T 011		λαη	Cor	Tla	T.AII	
181	Val	Asp	Thr	Leu			PIO	THE	Ата	330	116	ASP	per	116	335	Arg
182		_		_	325				1701		212	LOU	Thr	λcn		λτα
183	Glu	Ser	GLu		Ата	Pro	Ата	ser		TIII	Ата	ьeu	1111	350	ALG	лгу
184	_ •	•		340	m1	a1	<b>a</b> 1	3	345	Dwo	Cor	Dro	Dro		Thr	Ser
185	GLy	His			Thr	GIU	GIY		PIO	PIO	ser	PIO	365	FIO	1111	DCI
186		_	355		_	<b>.</b>	a	360	» 1 »	C++-	Ton	7 an		λen	Glu	Ι.Δ11
187	Thr	Pro	GLu	Lys	Cys	Leu			Ala	Cys	ьeu		гуѕ	ASII	GIU	пеп
188		370		_			375		<b>a</b>		T 4	380	N an	T 011	Cln	Пhr
189			His	Leu	Asp			Asp	ser	ASn	Leu	ASP	ASII	Leu	GIII	Thr 400
190	385					390		_	1		395		310	Т он	T 011	
191	Met	Leu	Ser	Ser			rne	ser	val			ser	HIG	пел	11 E	Asp
192		_		_	405		<b></b> '		ъ.	410		0	т	D~c	415	Lou
193	Leu	Phe	Ser			Val	Thr	val			мет	ser	ьeu			цец
194				420		_		<b>a</b> ?	425		T	0	D	430		D∽∽
195	Asp	Ser			Ala	Ser	He			ьeu	ьeu	ser			GIU	ΡŢΌ
196			435					440					445			

25 :

RAW SEQUENCE LISTING

DATE: 04/19/2002

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TIME: 16:05:07

Input Set : N:\Crf3\RULE60\10046420.raw
Output Set: N:\CRF3\04192002\J046420.raw

	197 198		Pro	Arg 450	Pro	Pro	Glu	Ala	Glu 455	Asn	Ser	Ser	Pro	Asp 460	Ser	Gly	Lys	Gln
	199			Val	His	Tyr	Thr	Ala 470		Pro	Leu	Phe	Leu 475	Leu	Asp	Pro	Gly	Ser 480
	200 201		465 Val	al Asp Thr Gly Ser Asn Asp Leu Pro Val Leu Phe Glu Leu Gly Glu													Glu	
	202			485 490 495 Gly Ser Tyr Phe Ser Glu Gly Asp Gly Phe Ala Glu Asp Pro Thr Ile														
	203		Gly	Ser	Tyr		Ser	Glu	Gly	Asp		Phe	Ala	Glu	Asp	Pro	Thr	Ile
	204					500		_		_	505	T	.1.	T	n an	510 Dro	Thr	Va 1
	205		Ser	Leu		Thr	Gly	Ser	GLu	Pro	Pro	гÀг	Ala	ьуѕ	525	PIO		Vai
	206		<b>a</b>	313														
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	213 <	<220>	FEA:	TURE	:									_				
	214 <	<223>	OTH	ER II	MFORI	MATI	: NC	A he	at s	hock	ele	ment	. A	nucl	eic	acid	mol	ecule
	215		that	t bi	nds v	with	a h	eat :	shoc	k tra	ansc	ript	ion	fact	or			
	216		to:	stim	ılat	e ge	ne e	xpre	ssio	n								
	217 <	<220>	FEA!	TURE	:													
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		<222>																
		<223>							А,Т,	C or	G							
		<400>																
W>							nntt	cn n	gaan									
••			_															

4/19/02

RAW SEQUENCE LISTING ERROR SUMMARY PATENT APPLICATION: US/10/046,420

DATE: 04/19/2002 TIME: 16:05:08

Input Set : N:\Crf3\RULE60\10046420.raw
Output Set: N:\CRF3\04192002\J046420.raw

## Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 1,5,6,10,11,12,13,14,15,16,20,21,25

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/046,420

DATE: 04/19/2002 TIME: 16:05:08

Input Set : N:\Crf3\RULE60\10046420.raw
Output Set: N:\CRF3\04192002\J046420.raw

L:222 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0